

DEPARTMENT: Environmental Services

REPORTS TO: GIS Manager

SUPERVISES: None

DEFINITION:

Responsible for designing protocols and executing spatial analyses in support of Citywide initiatives and projects. Applies specialized GIS software knowledge, programming and analysis principles to projects and assignments. Under limited supervision, the GIS Analyst coordinates specialized projects that support a specific department or division function. The GIS Analyst is responsible for creating, collecting, compiling, manipulating and maintaining data for various GIS applications as well as maintaining the accuracy of the GIS database(s) and technical files and documentation.

DISTINGUISHING CHARACTERISTICS:

The GIS Analyst is distinguished from the GIS Technician by a greater emphasis on problem solving and analysis. The GIS Analyst performs more complex technical assignments and works with limited supervision. The GIS Analyst may serve as a lead to the GIS Technician. This class is distinguished from the Engineering Technician series by the specialized knowledge required to create, build, utilize, and maintain GIS databases.

ESSENTIAL JOB FUNCTIONS-- (Any one position may not include all of the duties listed nor do the listed examples include all tasks which may be found in positions of this class.)

Responds to custom mapping and spatial analysis needs by creating data and maps using GIS and associated mapping software.

Maintains various GIS databases through map preparation, data entry, digitizing, map editing and quality control techniques. Codes and digitizes maps and geographic feature data and perform quality control checks to ensure the integrity of the database.

Converts AutoCAD drawings, coordinates data, and other non-GIS format information for integration with the City's GIS system.

Ensures compatibility of GIS data with other department divisions and City departments.

Develops custom scripts and applications to automate data collection, maintenance, and analysis.

Trains and assists GIS system users in defining needs and applying GIS tools.

Supports and assists in development of citywide spatial data and mapping standards

Assesses and recommends end-user information needs for departments, the public, and outside agencies.

Maintains technical knowledge in current GIS applications and theory. Maintains skills in the use of development tools and programming languages necessary to perform duties.

OTHER JOB FUNCTIONS

Performs fieldwork as required.

Assists and leads special projects related to divisional work plans.

Performs other related duties as assigned.

WORKING CONDITIONS:

Duties are primarily performed in an office environment while sitting at a computer terminal or drafting table. Physical effort is required to lift and carry items weighing up to 50 lbs. When performing field work, exposure to varying weather conditions, rough terrain, confined spaces and traffic may be required.

QUALIFICATIONS:

Knowledge of:

- Principles and practices of Geographic Information Systems (GIS).
- Spatial data software packages, ArcGIS, AutoCAD and other related computer software.
- Principles of spatial coordinate systems and datums
- Programming/scripting/querying languages including: Visual Basic, VBA, SQL, Python, HTML, ASP, and/or Javascript.
- Principles of desktop and web-based application design and development
- Relational database design and management, with specific knowledge of spatial database structures
- Plotter operation and wide-format printing procedures.
- Current literature, trends and development in the field of GIS.
- Principles and practices of technical engineering and surveying.
- Mathematical principals and statistical analysis techniques.
- The use of computers and applicable computer applications for drafting, mapping, locating, record keeping and other engineering purposes.
- Data gathering and research skills.

Ability to:

- Accurately create and maintain GIS databases in response to end user needs and according to City standards.
- Establish and maintain effective working relationships with a wide range of internal and external contacts.
- Automate routine tasks using models or programs.

- Clearly document programs, systems, and procedures.
- Produce complex and accurate spatial data, databases, analysis, and maps.
- Use precision equipment with high degree of accuracy.
- Receive, clarify and synthesize end-user needs in order to provide product desired.
- Anticipate future needs/uses, make recommendations and apply solutions that will accommodate them.
- Read and interpret technical materials such as engineering plans and specifications, maps, as-builts, computer manuals, code provisions, state and federal regulations and guidelines.
- Communicate effectively both orally and in writing.
- Work independently or as part of a team.
- Physically perform the essential functions of the job.

Education and Experience – Any equivalent combination of education and experience which provides the applicant with the knowledge, skills, and abilities required to perform the job. A typical way to obtain the knowledge and abilities would be:

Bachelor's degree in Geography, Computer Science, Information Systems, Urban Studies, Cartography, or related field with an emphasis on GIS and three years relevant experience using ArcGIS geographic systems.

Licenses, Certificates, and Other Requirements

Valid Driver's License.